WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

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CENTRAL REGIONAL OFFICE
15 W YAKIMA AVE, SUITE 200
YAKIMA, WASHINGTON 98902

STATEMENT OF BASIS
FOR
FINAL AIR OPERATING PERMIT
NO. 03AQ-C004 First Revision
SDS LUMBER COMPANY
BINGEN, WASHINGTON

PREPARED BY
WASHINGTON STATE DEPARTMENT OF ECOLOGY
REGIONAL AIR QUALITY SECTION
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November 19, 2004

LIST OF ABBREVIATIONS

AOP	Air Operating Permit
BACT	Best Available Control Technology
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COM	Continuous Opacity Monitor
DESP	Dry Electrostatic Precipitator
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ESP	Electrostatic Precipitator
hr	Hour
KEP	Klickitat Energy Partners
MMBtu	Millions of British Thermal Units
MRRR	Monitoring Recordkeeping Reporting Requirement
NOC	Notice of Construction
NO_X	Oxides of Nitrogen
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	Tons per year
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
WESP	Wet Electrostatic Precipitator
yr	Year

1.0 GENERAL INFORMATION

Company Name: SDS Lumber Company

Source Name: SDS Lumber Company

Unified Business Identification Number: C201000457

Standard Industrial Classification Code: 2421, 2436

Mailing Address: PO Box 266
Bingen, Washington 98605

Facility Address: Walnut and Steuben Street
Bingen, Washington 98605 (Klickitat County)

Responsible Official: Jason Spadaro
President
PO Box 266
Bingen, Washington 98605
(509) 493-2155

Source Contact: Vernon Buchanan
Environmental Compliance Manager
PO Box 266
Bingen, Washington 98605
(509) 493-2155

2.0 BACKGROUND

INTRODUCTION

This document sets forth the legal and factual basis for the permit conditions in an AOP issued by the State of Washington Department of Ecology for a sawmill and plywood manufacturer located in Bingen, Washington. This document is called a "statement of basis." The statement of basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

Basis for Title V Applicability:

The facility is a major source and has been included in the Title V AOP Program due to potential emissions of Particulate Matter and Carbon Monoxide exceeding 100 tons per year.

Attainment Classification:

SDS Lumber Company is located in an area which is unclassified for all criteria pollutants.

Timeline

October 7, 2002, October 9, 2002 – Ecology received SDS Lumber Company's AOP renewal application
October 9, 2002 – Ecology deemed AOP renewal application complete
June 23, 2003 – Ecology received updated CAM Plan
July 24, 2003 – Ecology issued Draft AOP renewal
September 9, 2003 – End of Draft AOP renewal comment period
September 10, 2003 – Ecology issued Proposed AOP renewal
September 29, 2003 – Ecology received EPA statement that, "The permit is now eligible for issuance."
October 6, 2003 – Ecology issued AOP renewal, effective October 10, 2003
April 21, 2004 – Ecology received request from SDS Lumber Company to revise Condition 5.3.2 parameter operating ranges.
August 23, 2004 – Ecology issued Draft AOP revision

Timeline cont.

September 27, 2004 – End of Draft AOP revision comment period
September 18, 2004 – Ecology issued Proposed AOP revision
November 17, 2004 – Ecology received EPA statement that, "The modification to the permit is now eligible for issuance."

3.0 SOURCE DESCRIPTION

3.1 PHYSICAL DESCRIPTION

SDS Lumber Company is located at Walnut and Steuben Street in the City of Bingen, Klickitat County, Washington. A plot plan of SDS Lumber Company is included as Figure 1. SDS Lumber Company manufactures studs, dimensional lumber, plywood, and wood chips. The source consists of a hog fuel boiler, two (2) veneer dryers, two (2) drying kilns, two (2) stud mills, a band mill, a wood chipper, miscellaneous wood processing equipment, and multiple emission control devices (i.e. baghouses, cyclones, wet electrostatic precipitator (WESP), dry electrostatic precipitator (DESP)).

3.2 DESCRIPTION OF PROCESSES

Process #1, Source-Wide

Logs are transported to the source where they are stored on-site. Approximately 66,000,000 board feet of logs are processed annually. Typically the logs are Douglas fir, white fir, or pine. Figure 2 displays a process flow diagram for SDS Lumber Company. Listings of significant and insignificant emissions units are included in Tables 1 and 3. Calendar year 2002 emissions are listed in Table 2.

Logs begin processing by first being debarked and then are sent to the various manufacturing operations. Typically these debarked logs will be used in the manufacture of either plywood or studs. Those logs not used elsewhere are chipped. Steam, produced by the hog fuel boiler, is used for process heating of the veneer dryers, stud mill kiln, and the steam vats. The source also has two steam powered turbines used to produce electrical power for use within the source and for sale to electric utilities.

The studmills process logs (SIC Code = 2421), into dimensional sizes such as 2 x 4 s and 4 x 4 s. Lumber produced in the studmills are typically dried in the one of the drying kilns. These kilns are heated with steam. The dried lumber is then planed and sawn to the final dimensions.

For plywood production (SIC Code = 2436), debarked logs are soaked in steam vats to soften them prior to being peeled in the veneer lathes. Veneers are then dried in one of two single chamber veneer dryers. Some dried veneer is then coated with glue and pressed into plywood. The rough plywood edges are trimmed to size and knot holes are routed out and filled with putty. Some of the plywood is sanded. Trimmings are hammer milled and then combined with sander residue. These residues are then size speciated in a cyclone with the finer material being exhausted through a baghouse. The larger material is generally used for hog fuel.

Those logs not used elsewhere are chipped or sold for other uses. Chipped logs are processed in a v-drum chipper. Chips and sawdust are conveyed to the chip and sawdust piles through a combination of pneumatic, belt, and bucket conveyors, where they are stored in piles that are partially surrounded by wind screens. These chips along with additional chips and sawdust produced throughout the source are sold.

Process #2, Hog Fuel Boiler

The hog fuel boiler is fueled by bark, wood waste, sander dust, and shavings. The boiler uses natural gas for startup and shutdown. Particulate matter emissions are controlled with a multiclone and a dry electrostatic precipitator. The boiler produces steam for use within SDS Lumber Company, as process heat, and for power sale to electric utilities (SIC Code = 2421).

Process #3, Veneer Dryers

There are two steam heated veneer dryers used in the production of plywood (SIC Code 2436). The emissions from these dryers are captured and routed through a wet electrostatic precipitator.

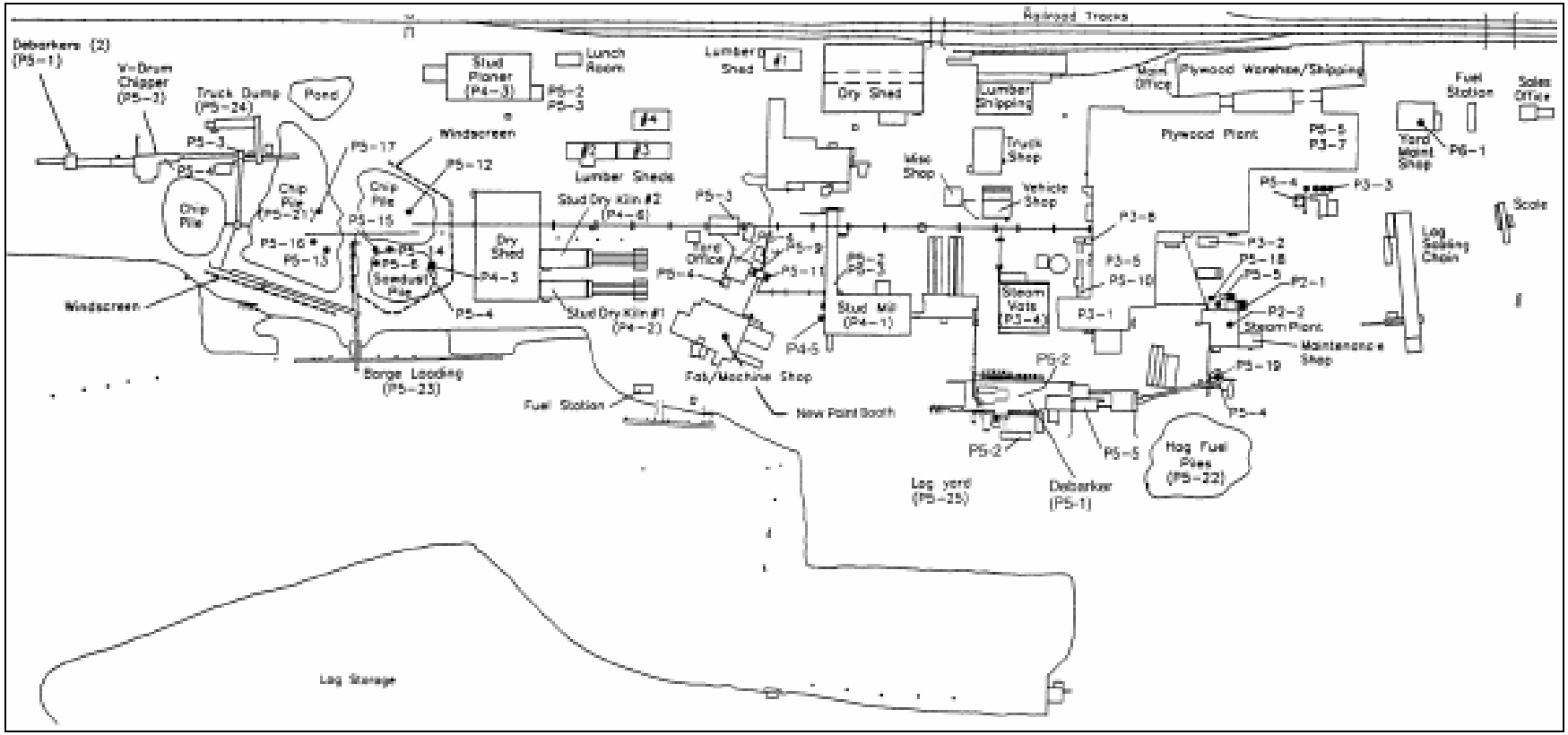

Figure 1. Plot plan of SDS Lumber Company (taken from 7/23/03 email from Vernon Buchanan, SDS).

Table 1. Potential Emissions from Significant Emission Units. (adapted from, *Final Air Operating Permit Application, Appendix A*, received 10/7/02; *PSD Applicability Determination memorandum from Lynnette Haller to Sue Billings*, dated 12/18/01; and) (Note: SDS Lumber Company's total potential-to-emit is slightly greater than the totals indicated in this table when insignificant emissions units are included.)

Emission Point	Description	TSP (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	VOC (tpy)	CO (tpy)	SO_2 (tpy)	NO_X (tpy)	Lead (tpy)
P1-2	Usage of VOC-Containing Products								
P2-1	Hog Fuel Boiler	65.3	65.3	65.3	8.1	470	15.6	121.6	0.001
P3-2	Veneer Dryers (2)	2.5	1.9	1.5	8	3.9			
P3-3	Plywood Plant Baghouses (4)	10.3	10.3	10.3					
P3-7	Plywood Glue and Putty Usage				7.8				
P3-8	Stacker/Diverter Cyclone	2	1	0.6					
P4-2	Stud Mill Kiln #1	2.3	2.3	2.3	22.9				
P4-3	Planer Mill Bagplant	5.3	5.3	5.3					
4-6	Stud Mill Kiln #2 ("new" dry kiln)	2.3	2.3	2.3	22.9				
P5-1	Debarkers and End Saws	16.2	8.1	3.2					
P5-9	End Saw Chip Cyclone	3	1.5	0.9					
P5-10	Veneer Lathe Chipper Cyclone #1	3.4	1.7	1					
P5-11	Veneer Lathe Chipper Cyclone #2	5	2.5	1.5					
P5-12	* Stud Mill Sizer/Shaker Chip Discharge	8.6	4.3	2.6					
P5-13	* Stud Mill Sizer/Shaker Chip Cyclone #2								
P5-14	Stud Mill Sizer/Shaker Sawdust Cyclone	3	1.5	0.9					
P5-18	Hog Fuel Boiler Sawdust Cyclone	2	1	0.6					
P5-19	Hog Fuel Silo Cyclone	1.9	0.9	0.6					
P5-21	Wood Chip/Sawdust Piles	1.2	0.6	0.1					
P5-25	Logyard	60	17.1	2.6					
	TOTAL	**194.3**	**127.6**	**101.6**	**69.7**	**473.9**	**15.6**	**121.6**	**0.0**

* Stud mill sizer/shaker chip discharge and stud mill sizer/shaker cyclone #2 do not operate simultaneously. P5-13 is currently out of service.

Process #4, Plywood Sanding
Some of the plywood sheets are sanded after being trimmed to size and having the knot holes routed out and filled with putty (SIC Code = 2436). Particulate matter emissions are controlled by use of cyclones and baghouses used in series.

Process #5, Materials Handling and Storage
Chips and sawdust are conveyed, from various locations within the source, to a partially enclosed storage area (SIC Code = 2421). Chips and sawdust are conveyed to the storage piles by pneumatic, belt, and bucket conveyors. Some of the pneumatic conveyors terminate with cyclone collectors or baghouses to collect and minimize air emissions.

Process #6, New Stud Mill
The new stud mill (#2) (SIC Code = 2421) is located in the same building as the 1990 stud mill. The stud mill's total output is limited to 150,000,000 board feet of Douglas fir, true fir, or hemlock lumber sawn per 12-month period

Process #7, New Dry Kiln
The new dry kiln (#2) (SIC Code = 2421) is located next to the previously existing stud mill. The dry kiln's total throughput is limited to 100,135,480 board feet of Douglas fir, true fir, or hemlock dried per 12-month period

Process #8, Debarker
Up to 1,450,000 tons of logs may be debarked per 12-month period. Debarked logs are processed in the plywood plant, the sawmill, or are chipped.